

Claims

- [c1] 1. An inkjet printer identification circuit, for providing a content stored in an inkjet print head for an inkjet printer, said inkjet print head disposed inside said inkjet printer, comprising:
a plurality of control lines;
a control circuit, providing a control signal to said plurality of control lines; and
an identification module, including an identification unit, said identification unit including at least a control input terminal, an output terminal and at least a data input terminal, said data input terminal being coupled to a memory unit, said control input terminal being coupled to one of said plurality of control lines, said identification unit responsive to said control signal for determining and outputting the content stored in said memory unit via said output terminal.
- [c2] 2. The circuit of claim 1, wherein said memory unit includes a fuse.
- [c3] 3. The circuit of claim 1, wherein said memory unit includes a low-power resistor.

[c4] 4. The circuit of claim 1, wherein said identification unit comprises a NAND gate, said NAND gate includes a plurality of NAND gate input terminals and a NAND gate output terminal, one of said plurality of NAND gate input terminals is coupled to said data input terminal, one of the other of said plurality of NAND gate input terminals is coupled to said control input terminal, said NAND gate output terminal is said output terminal of said identification unit.

[c5] 5. The circuit of claim 1, wherein when said identification module comprises a plurality of identification units, each of said plurality of identification units comprises at least a control input terminal, an output terminal and a plurality of data input terminals, said plurality of data input terminals is coupled to a corresponding one of a plurality of memory unit respectively, said control input terminal is coupled to corresponding one of said plurality of control lines, said identification units are responsive to said control signals received from said plurality of control lines for determining and outputting the content stored in at least one of said plurality of memory units via said output terminal.

[c6] 6. The circuit of claim 5, wherein each of said plurality of identification units comprises :
a plurality of AND gates, each of said plurality of AND

gates including a plurality of AND gate input terminals and an AND gate output terminal, at least one of said plurality of AND gate input terminals being coupled to one of said plurality of data input terminals, the other said plurality of AND gate input terminals being coupled to said control input terminal; and
a NOR gate, including a plurality of NOR gate input terminals and a NOR gate output terminal, each of said plurality of AND gate output terminals being coupled to one of said plurality of NOR gate input terminals, said NOR gate output terminal being said output terminal of said identification unit.

[c7] 7. The circuit of claim 1, wherein said identification module is electrically coupled to said control circuit via a transmission line.

[c8] 8. The circuit of claim 1, wherein said plurality of control lines is power supply lines.

[c9] 9. The circuit of claim 1, wherein said plurality of control lines is address lines.

[c10] 10. An inkjet printer identification module, for providing a content stored in an inkjet print head for an inkjet printer, said inkjet print head disposed inside said inkjet printer, comprising:

an identification unit, said identification unit including at least a control input terminal, an output terminal and at least a data input terminal, said data input terminal being coupled to a memory unit, said control input terminal receives said control signal from said inkjet printer, said identification unit responsive to said control signal for determining and outputting a content stored in said memory unit via said output terminal.

[c11] 11. The inkjet printer identification module of claim 10, wherein said memory unit includes a fuse.

[c12] 12. The inkjet printer identification module of claim 10, wherein said memory unit includes a low-power resistor.

[c13] 13. The inkjet printer identification module of claim 10, wherein said identification unit includes a NAND gate, said NAND gate includes a plurality of NAND gate input terminals and a NAND gate output terminal, one of said plurality of NAND gate input terminals is coupled to said data input terminal, one of the other of said plurality of NAND gate input terminals is coupled to said control input terminal, said NAND gate output terminal is said output terminal of said identification unit.

[c14] 14. The inkjet printer identification module of claim 10, wherein when said identification module includes a plu-

ality of identification units, each of said plurality of identification units includes at least a control input terminal, an output terminal and a plurality of data input terminals, said plurality of data input terminal is coupled to a corresponding one of a plurality of memory unit respectively, said control input terminal is coupled to corresponding one of a plurality of control lines, said identification unit is responsive to said control signal received from said plurality of control lines for determining and outputting a content stored in at least one of said plurality of memory units via said output terminal.

- [c15] 15. The inkjet printer identification module of claim 14, wherein each of said plurality of identification units includes:
- a plurality of AND gates, each of said plurality of AND gates including a plurality of AND gate input terminals and an AND gate output terminal, at least one of said plurality of AND gate input terminals being coupled to one of said plurality of data input terminals, the other said plurality of AND gate input terminals being coupled to said control input terminal; and
 - a NOR gate, including a plurality of NOR gate input terminals and a NOR gate output terminal, each of said plurality of AND gate output terminals being coupled to one of said plurality of NOR gate input terminals, said NOR

gate output terminal being said output terminal of said identification unit.

[c16] 16. An inkjet printer identification method comprising:
using at least one control signal to read a content stored
in at least a memory unit, wherein said memory unit is
read via an identification unit based on an arrangement
of a signal level of said control signal.

[c17] 17. The method of claim 16, wherein the step of reading
said memory unit includes reading said content stored in
said memory unit via an address line.

[c18] 18. The method of claim 16, wherein the step of reading
said memory unit includes reading said content stored in
said memory unit via a power supply line.

[c19] 19. The method of claim 16, wherein said content at
least includes one of an ink cartridge product number, a
number of inkjet nozzle, a volume of ink, a manufactur-
ing date, a status of an ink cartridge, a type of an ink.

[c20] 20. The method of claim 16, wherein said memory unit
includes a fuse.

[c21] 21. The method of claim 16, wherein said memory unit
includes a low-power resistor.

[c22] 22. The method of claim 16, wherein said identification

unit including at least a control input terminal, an output terminal and at least a data input terminal, said data input terminal is coupled to a memory unit, said control input terminal is coupled to one of said plurality of control lines, said identification unit is responsive to said control signal for determining and outputting a content stored in said memory unit via said output terminal.

[c23] 23. The method of claim 22, wherein said identification unit includes a NAND gate, said NAND gate includes a plurality of NAND gate input terminals and a NAND gate output terminal, one of said plurality of NAND gate input terminals is coupled to said data input terminal, one of the other of said plurality of NAND gate input terminals is coupled to said control input terminal, said NAND gate output terminal is said output terminal of said identification unit.

[c24] 24. The method of claim 22, wherein said identification unit includes:
a plurality of AND gates, each of said plurality of AND gates including a plurality of AND gate input terminals and an AND gate output terminal, one of said plurality of AND gate input terminals being coupled to one of said plurality of data input terminals, the other said plurality of AND gate input terminals being coupled to said control input terminal; and

a NOR gate, including a plurality of NOR gate input terminals and a NOR gate output terminal, each of said plurality of AND gate output terminals being coupled to one of said plurality of NOR gate input terminals, said NOR gate output terminal being said output terminal of said identification unit.

[c25] 25. An inkjet printer identification method characterized in using a control signal to read a content stored in one of a plurality of memory units, wherein one of said plurality of memory units is read via an identification unit based on an arrangement of signal level of said control signal.

[c26] 26. The method of claim 25, wherein the step of reading one of said plurality of memory units includes reading said content stored in said one of said plurality of memory units via one of a plurality of address lines.

[c27] 27. The method of claim 25, wherein the step of reading one of said plurality of memory units includes reading said content stored in said one of said plurality of memory units via one of a plurality of power supply lines.

[c28] 28. The method of claim 25, wherein said content at least includes one of an ink cartridge product number, a number of inkjet nozzle, a volume of ink, a manufactur-

ing date, a status of an ink cartridge, a type of an ink.